

REMARKS

Reconsideration and Allowance are Respectfully Requested

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow.

In response to the outstanding Final Office Action of March 17, 2003, Applicant has amended the application. Claims 1-60 have been cancelled. Claim 1 has been amended. New claims 62-72 have been added to the application.

In the outstanding Office Action, the Examiner rejected claim 39 under 35 U.S.C. § 112 as being indefinite. Claim 39 has been cancelled.

In the outstanding Office Action, the Examiner rejected claims 33, 34, 38, 39 and 41 as being unpatentable over the patent to Gorman, 5,048,835. The Examiner takes the position that the upper portion extends downwardly toward the bottom sole approximately one third the distance between the top ridge and bottom sole and that the bottom portion extends approximately two thirds of the distance between the bottom sole and top ridge. Applicant respectfully submits this reading of the Gorman patent is inaccurate. Gorman is one of many peripheral weighted golf clubs that are common in the marketplace and in the patent literature. The upper portion 22 is an upper peripheral mass defining the upper edge of the cavity. This mass is not a blade type structure as is commonly defined in the golf industry. In Figure 1, looking from the toe toward the heel, it can be clearly seen at the toe 4 that the thickness of the club head is a structure gradually increasing in thickness from the top ridge toward the bottom sole. There is no separate upper and lower portions. Two sections are not shown. The upper portion is not "non-perimeter weighted" as

claimed, rather it is defined as a peripheral mass, which, of course is another way of defining perimeter weight. Moreover the upper portion (peripheral mass) is located well up on the rear surface toward the top ridge. The upper portion of Gorman is not of generally uniform thickness, rather it becomes progressively wider as it transitions toward the bottom sole. Looking at the rear elevational view of Figure 2, the cavity extends well past 75% of the distance between the bottom sole and top ridge, much greater than the two thirds limitation of Applicant's claim, whereby the upper portion is less than 25% of the distance between the top ridge and bottom sole. The Examiner indicates that it would be obvious to alter the distance of this member in as much as the club will work equally well.

With due respect, the club head does not work equally well and the overall location of the blade portion and the lower cavity creates a club head which is not only unique but which outperforms conventional peripheral mass club heads that are available. Applicant's invention is an iron type golf club head having a heel to toe elongated rear cavity and perimeter weight forming the cavity that is located solely on the lower portion of the rear surface of the club head, toward the bottom sole. Extending the rear cavity to the upper edge, as shown in the cited Gorman patent, causes the vibration from ball contact to dissipate, thus reducing feel to the golfer.

Unlike the prior art, Applicant's cavity does not extend to the upper edge of the club head, rather it is confined to the lower area of the iron head's rear surface behind the actual area where virtually all miss hits occur. By lowering the top edge of the cavity and keeping its width in a heel to toe direction, the iron type club head of the present invention generates a tighter, blade like feel while still providing forgiveness for off-center hits. Therefore, a primary concept of the present invention is to provide more forgiveness only at a critical location at the lower portion of the club

head while maintaining the structure of a blade type iron at the upper areas of the club head to provide a more solid feel when the club head makes contact with a ball during the execution of a golf shot. Applicant's preferred embodiments locate a heel to toe, perimeter weighted cavity on a lower two-thirds portion of the rear surface of the club head. A specific preferred embodiment locates a perimeter weighted cavity on the bottom half of the rear surface of a club head. Applicant's new claim redefines the invention whereby the claimed limitations are not found in the prior art either alone or in combination. Applicant specifically calls for an upper and a lower portion which extend entirely across the rear of the club head from adjacent the toe to the heel. The claim further calls for the upper one third and lower two thirds relationship to be maintained entirely across the rear surface. More specifically applicant calls for the upper surface to be defined as a non-perimeter weighted, blade type iron structure having a generally uniform thickness from the heel to the toe. The claim also calls for the lower surface to have a thickness which is progressively wider toward the bottom sole.

None of the cited prior art, either alone or in combination, shows the underlying concept of Applicant's invention, that is, none of the prior art is formed with a two-part rear surface including a lower, elongated, perimeter weighted cavity that is located entirely on the bottom of the rear surface of the club head. Applicant's own patent, applied by the Examiner, teaches away from the present invention by placing the cavity on the upper portion of the rear surface of a club head. Applicant's new independent claim 62 clearly defines the structure of Applicant's invention. Claim 61 defines a club head wherein the perimeter weight and cavity is located only in a lower half of the rear surface.

In the outstanding Office Action, the Examiner cites U.S. Patent No. 4,645,207 to Teramoto et al, particularly referring to Figure 4a. , which shows "a recess at the back of the face member".

The reference is silent as to the shape of the recess, or how wide the recess is relative to the overall club head. Further in this regard Figure 4a does not show a cavity wall so it is not clear that the recess is a cavity. There is simply not enough structure to define the structure of the recess in this patent. Without such structure, Applicant respectfully submits a combination with Gorman is not taught by this prior art.

The cited patent No 5,643,112 to Besnard does show a cavity thickness less than the overall thickness of the upper part of the club head. However, this structure is well known in the art. Besnard does not show Applicant's rear surface portions with a cavity only in the lower two thirds of the club head.

Applicant's dependent claims, in combination with a lower cavity, call for additional structure, including a cavity insert, an additional weighted mass in the cavity and specific cavity locations toward the toe and heel areas of the club head. The applied references do not show these structures in combination with the lower cavity structure.

Briefly summarizing, Applicant claims the following features:

a) a rear surface with an upper blade portion one third of the distance between the top ridge and bottom sole and a lower cavity portion in the remaining two thirds distance.....

No cited reference shows this structure.

b) a rear club head wherein the one third/two thirds relationship between the upper and lower portions is maintained entirely across the rear surface from adjacent the heel to the toe....

No cited reference shows this structure.

c) an elongated cavity forming peripheral weight located solely in the lower portion.....

No cited reference shows this structure.

d) an upper portion that is non-perimeter weighted and has a generally uniform thickness.....

No cited reference shows this structure.

e) a lower portion having a thickness becoming progressively wider toward the bottom sole...

No cited reference shows this structure.

Thus there are at least five distinct claimed limitations not shown in the prior art which define Applicant's invention over the prior art. Because of the overall simplicity of golf club heads, there is a tendency to minimize changes in the art. Applicant's structure represent a breakthrough in the golf club head technology. To dismiss this technology as mere obviousness or choice in design, without showing of prior art, with a statement that it "works equally well" is a position not justified by the performance of the club heads when used on golf clubs to hit golf balls. Many small changes in golf club designs have made vast improvements in performance. Applicant's invention is such an improvement and is deserving of patent protection.

Therefore, for the reasons outlined above, Applicant respectfully requests reconsideration of the outstanding rejections and a notice of allowance thereafter. Early notification thereof is earnestly solicited.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact Applicant's representative at the below number.

Respectfully submitted,



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